

## PATENT COOPERATION TREATY

**PCT****INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 11 NOV 2005

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Applicant's or agent's file reference MI6124 PGU		<b>FOR FURTHER ACTION</b>		See Form PCT/PEA416
International application No. PCT/EP2004/008252		International filing date (day/month/year) 22.07.2004		Priority date (day/month/year) 05.08.2003
International Patent Classification (IPC) or national classification and IPC C08L23/10, C08J5/18, B32B27/32				
Applicant BASELL POLIOLEFINE ITALIA S.R.L.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 3 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  19.05.2005		Date of completion of this report  11.11.2005		
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Droghetti, A Telephone No. +31 70 340-4143		



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**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

**Description, Pages**

1, 2, 4-22	as originally filed
3	received on 19.05.2005 with letter of 19.05.2005

**Claims, Numbers**

1-10	received on 19.05.2005 with letter of 19.05.2005
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- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	4-6
	No: Claims	1-3,7-10
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

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**Re Item V**

Reference is made to the following documents:

D1: EP A 0373660  
D2: US B 6433087 (cited by the applicant)  
D3: WO A 02/38670

1. The amendments filed as received on 19.05.2005 are allowable in view of **Article 34(2)(b) PCT**.

**2. Novelty (Art. 33(2) PCT)**

The subject-matter of claims 1-3,7-10 is not novel in view of the prior art document D1. The reasons as follows.

D1 discloses polymer blends for a range of articles requiring impact resistance (e.g. tubes, films) and comprising an isotactic PP and an ethylene elastomer having I.V. and comonomer content as claimed (see search report). The final blend has MI as claimed.

Even if the ratio between the I.V. of the components is not explicitly mentioned, in the examples reported in D1 this falls in the same range as claimed.

Furthermore the MWD of the i-PP is not defined in D1, however being the i-PP prepared by the same catalysts and process as described in the present application, it is supposed to be the same as claimed (see page 3, line 38 in D1 and page 8, line 2 in the present description).

Moreover being the same polymers, the articles in D1 can achieve the same modulus of elasticity in tension as claimed.

Thus the subject-matter of claims 1-3,7-10 is not novel in view of D1.

**3. Inventive Step (Art. 33(3) PCT)**

The subject-matter of claims 1-10 is not inventive for the following reasons.

3.1. Being not novel the subject-matter of claims 1-3,7-10 cannot be regarded as inventive either.

3.2. Furthermore claims 4-6 do not contain any features which, in combination with the features of any claim

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to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows.

The present application differs from D1, which is regarded as the closest prior art (see above 1.), in that defined pipes can be prepared from the polymer blend.

Note that these pipes appear, in view of the present description, only as a mere alternative to the articles cited in D1.

However the use of blends comprising i-PP and an elastomer for preparing pipes as claimed is known in the art.

In D2 or D3, for example, pipes as claimed are prepared from comparable polymer mixtures (e.g. the blend presents the same ratio of I.V. and similar polymer components).

Thus also the subject-matter of claims 4-6 is not regarded as inventive in view of D1-D3.

4. The subject-matter of claims 1-10 meets the requirements of **Article 33(4) PCT**, with regard to **industrial applicability**.

**Re Item VII**

1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D3 is not mentioned in the description, nor are these documents identified therein.

**Re Item VIII (Art. 6 PCT)**

1. In claim 1 the expression "prepared by extrusion..." attempts to define the invention by the process for preparing the same .

This process feature does not limit the product claim, rendering the same unclear.

2. The methods or at least the conditions for determining the I.V., the MI, the modulus of elasticity in tension and the MWD of the polymer components and of the blend should be mentioned in the claims (see pages 13-14).

3. Claim 5 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter in terms of the result to be achieved, which merely amounts to a statement of the underlying problem, without providing the technical features necessary for achieving this result.

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Note furthermore that the term "smooth" is relative and does not define any precise technical feature of the pipe.

4. Claim 10 is not supported by the description.